

Commercial Space Line

InstaBend® 086

High Performance Microwave Assemblies



InstaBend® are flexible, coaxial microwave assemblies designed for interconnects between RF circuit cards, modules and enclosure panels. The cable can be bent very closely behind the connector, simplifying cable routing.

Features:

- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Optimized for lowest attenuation
- Ultra stable performance with flexure
- Superior shielding effectiveness (>90 dB)
- Radiation Resistance: 30 MRads
- 90° torque resistance

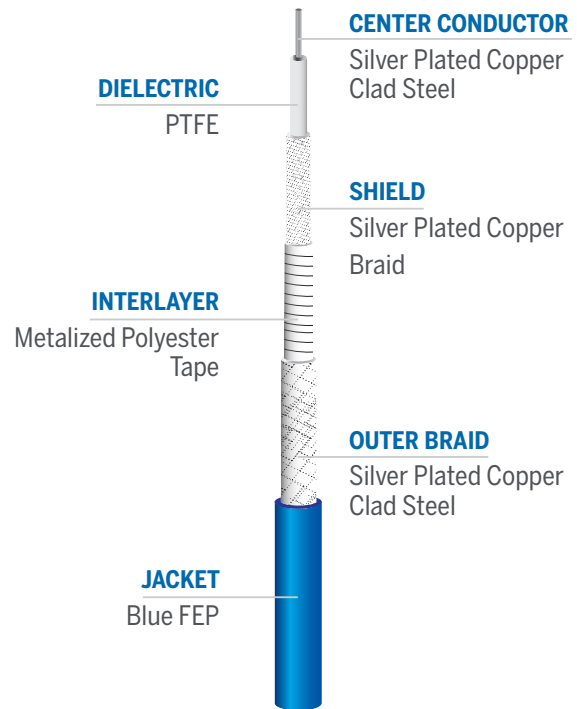
Specifications

Ω Impedance
50 Ohms

Op Temp
-85 to 257°F
-65 to 125°C

Units

	Units	
Diameter	in (mm)	0.108 (2.74)
Weight	lb/ft (g/m)	0.013 (19)
Minimum Bend Radius	in (mm)	0.25 (6.35)
Maximum Frequency	GHz	50
Velocity of Propagation	%	70
Capacitance	pF/ft (pF/m)	29 (95.1)
Delay	ns/ft (ns/m)	1.45 (4.76)
Shielding	dB	>90



Insertion loss & VSWR

Stock Code	Max. Insertion Loss in dB @ 40GHz	Max. VSWR @ 40GHz
IE-00412-01	1.45	1.40
IE-00412-02	1.78	1.40
IE-00412-03	2.11	1.40
IE-00412-04	2.45	1.40
	Max. Insertion Loss in dB @ 22GHz	Max. VSWR @ 22GHz
IE-00413-01	1.02	1.35
IE-00413-02	1.24	1.35
IE-00413-03	1.47	1.35
IE-00413-04	1.71	1.35

Calculation

$$IL = (K1 \times v(f) + K2 \times x) \times \text{Cable Length} + \text{Connector Loss}$$

Cable Insertion Loss
f = Frequency (MHz)

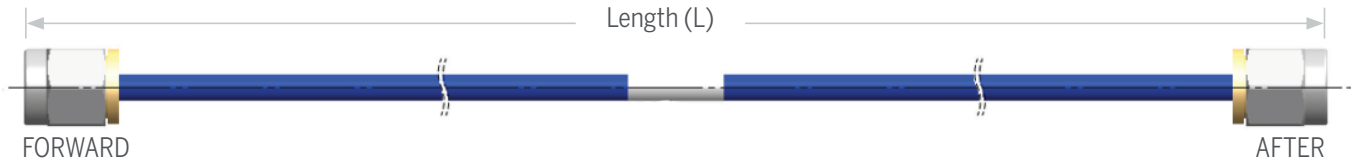
Use **K** values with
matching length unit

K values	dB/ft	dB/m
K1	0.006446	0.021148
K2	0.000013	0.000043

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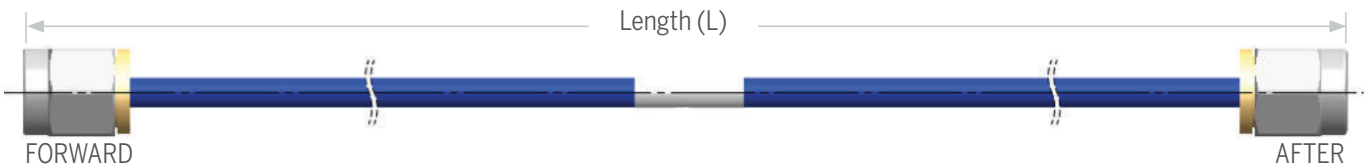
Ordering Guide



IBS086 - **SP120** **SP120** - **XX.X** **IN**
 Forward Connector After Connector Length Units of measure
 IN - Inchs

Stock Code	Part-Number	Length (L) in inch
IE-00412-01	IBS086-KMKM-6.0IN	6
IE-00412-02	IBS086-KMKM-8.0IN	8
IE-00412-03	IBS086-KMKM-10.0IN	10
IE-00412-04	IBS086-KMKM-12.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP120	Type 2.92mm (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)




IBS086 - **SP110** **SP110** - **XX.X** **IN**
 Forward Connector After Connector Length Units of measure
 IN - Inchs

Stock Code	Part-Number	Length (L) in inch
E-00413-01	IBS086-SMSM-6.0IN	6
IE-00413-02	IBS086-SMSM-8.0IN	8
IE-00413-03	IBS086-SMSM-10.0IN	10
IE-00413-04	IBS086-SMSM-12.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP110	Type SMA (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x vf (GHz)


 Global manufacturing capability: US, and Asia.


 Heritage—in the air and on the ground, thousands of assemblies built over decades.


 Assembled and tested assemblies provide assured performance.

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